

ANNUAL FIRE WEATHER OPERATIONAL REPORT

Fire Season 2016 – Medford, Oregon

1. Fire Weather Meteorologists:

Frederic Bunnag (IMET, Asst Fire FP)	Connie Clarstrom
Noel “Shad” Keene (IMET)	Brett Lütz (Fire FP)
Brian Nieuwenhuis	Sven Nelaimischkies
Michael Petrucelli	Ken Sargeant (ITO)
Ryan Sandler (WCM)	Marc Spilde
Michael Stavish (SOO)	Jay Stockton
Daniel Weygand	Thomas Wright
Bradley Schaaf	

1.5 BAER Team Hydrologist: Spencer Higginson

2. Spot Forecast Statistics (from The National Spot Forecast Statistics Page):

Total Number of Written Spot Forecasts: 833

By Type: Prescribed Burns 599...Wildfires 218... SAR 15... HAZMAT 0.

Request Source: Wildfire 218...Interagency Agreement 572...State/Local 8...Public Safety 35.

3. Total # of Fire Weather Courses Taught or Attended in 2015:

Taught: 7

April 7: S-390 (Weed, CA): Wright.

April 25: Hot Shot Crew Weather Refresher (Klamath Falls): Lutz

April 28-29: S-290 (Coos Bay, Coos FPA/ODF): Lutz

May 10: Trex International Fire Weather Training (Southern Oregon University): Keene.

May 12: Lakeview Interagency Fire Center, Fire Weather Training/Outlook (Klamath Falls): Keene.

May 19: Klamath National Forest Training/Outlook (Yreka): Keene.

June 22-23: S-290 (Roseburg, OR): Bunnag.

Attended: 3

March 14th-18th: IMET Workshop. Bunnag.

April 12th: RT-130: Central Point, OR. Keene & Higginson.

April 12th: Arduous Pack Test: RT-130: Central Point, OR, Higginson.

4. Outreach and Liaison Activities 2016:

December 2nd: Oregon Department of Forestry visit to WFO, Sandler/Lutz

January 14th: Medford BLM Fire Refresher Season Outlook, Keene

January 28th: PIO Meeting, ODF, MIC Lovegrove

February 18th: Webinar with Modoc IFC Burn Bosses, Lutz

March 7th: Douglas Complex Burn Scar site visit w/Medford & Grants Pass BLM Hydrologists, Lutz

March 10-11th: California Virtual AOP Meeting

March 18th: Medford BLM Fire Refresher Season Outlook, Lutz

April 13th, ODF Public Information Officer Meeting, Sandler & Nieuwenhuis

April 20th, Coos Bay BLM Agency & Fire Partners Spring Meeting & Outlook, Bunnag

April 20-21st: Portland GACC Annual Meeting, Lutz

April 27th: Klamath National Forest Pre-season Meeting, MacDoel, CA, Sandler.

April 27th: Roseburg Forest Supervisor and Staff Preseason Meeting & Outlook, Lutz.

May 3rd: Rogue Valley Dispatch, Situational Awareness Display Meeting, Keene

May 4th: Modoc IFC Cooperator & Stakeholder Meeting, Alturas, CA. Lutz

May 16th: Fremont-Winema NF Refresher & Outlook, Klamath Falls, OR. Keene

May 18th: Ashland Fire Prescribed Burn, Ashland, OR. Lutz, Duncan, Smith, Sven, Brian.

May 19th: Roseburg Preseason Fire Meeting, Bunnag.

May 19th: Yreka Dispatch Cooperator Meeting with CalFire. Keene

May 24th: Siskiyou Rapellers tour Medford WFO, Sandler.

June 3rd: Southwest Oregon ODF PIO Meeting, Sandler.

June 8th: Northern California Multi-Agency Cooperator Meeting, NFS, CalFire, McCloud, CA. Lutz

June 10th: Klamath National Forest Pre-season Meeting & Outlook, Fort Jones, CA. Lutz

June 15th: Crater Lake National Park Pre-season Meeting & Outlook. Sandler

June 23rd: Medford BLM Fire Refresher & season Outlook, Wright

5. Fire Weather Watches and Red Flag Warnings 2016:

Total Warnings

A...Number of warnings verified	=	66		
B...Number of events missed	=	0		
C...Number of warnings not verified	=	10		
Total number of warnings issued	=	76		
Probability of Detection $A / (A+B)$	=	$66 / (66+0)$	=	100%
False Alarm Rate $C / (A+C)$	=	$10 / (66+10)$	=	13%
Critical Success Index $A / (A+B+C)$	=	$66 / (66+0+10)$	=	87%
Number of Warnings preceded by Watches	=	42		
Total number of Watches issued	=	49		
Average Lead Time	=	22 hours 46 minutes		

Synoptic Warnings:

A...Number of warnings verified	=	64		
B...Number of events missed	=	0		
C...Number of warnings not verified	=	7		
Total number of warnings issued	=	71		
Probability of Detection $A / (A+B)$	=	$64 / (64+0)$	=	100%
False Alarm Rate $C / (A+C)$	=	$7 / (64+7)$	=	10%
Critical Success Index $A / (A+B+C)$	=	$64 / (64+0+7)$	=	90%
Number of Warnings preceded by Watches	=	38		
Total number of Watches issued	=	43		
Average Lead Time	=	22 hours 40 minutes		

Lightning Warnings:

A...Number of warnings verified	=	2
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B...Number of events missed	=	0	
C...Number of warnings not verified	=	3	
Total number of warnings issued	=	5	
Probability of Detection $A / (A+B)$	=	$2 / (2+0)$	= 100%
False Alarm Rate $C / (A+C)$	=	$3 / (2+3)$	= 60%
Critical Success Index $A / (A+B+C)$	=	$2 / (2+0+3)$	= 40%
Number of Warnings preceded by Watches	=	4	
Total number of Watches issued	=	6	
Average Lead Time	=	26 hours 5 minutes	

6. Incident Meteorologist Dispatches 2016

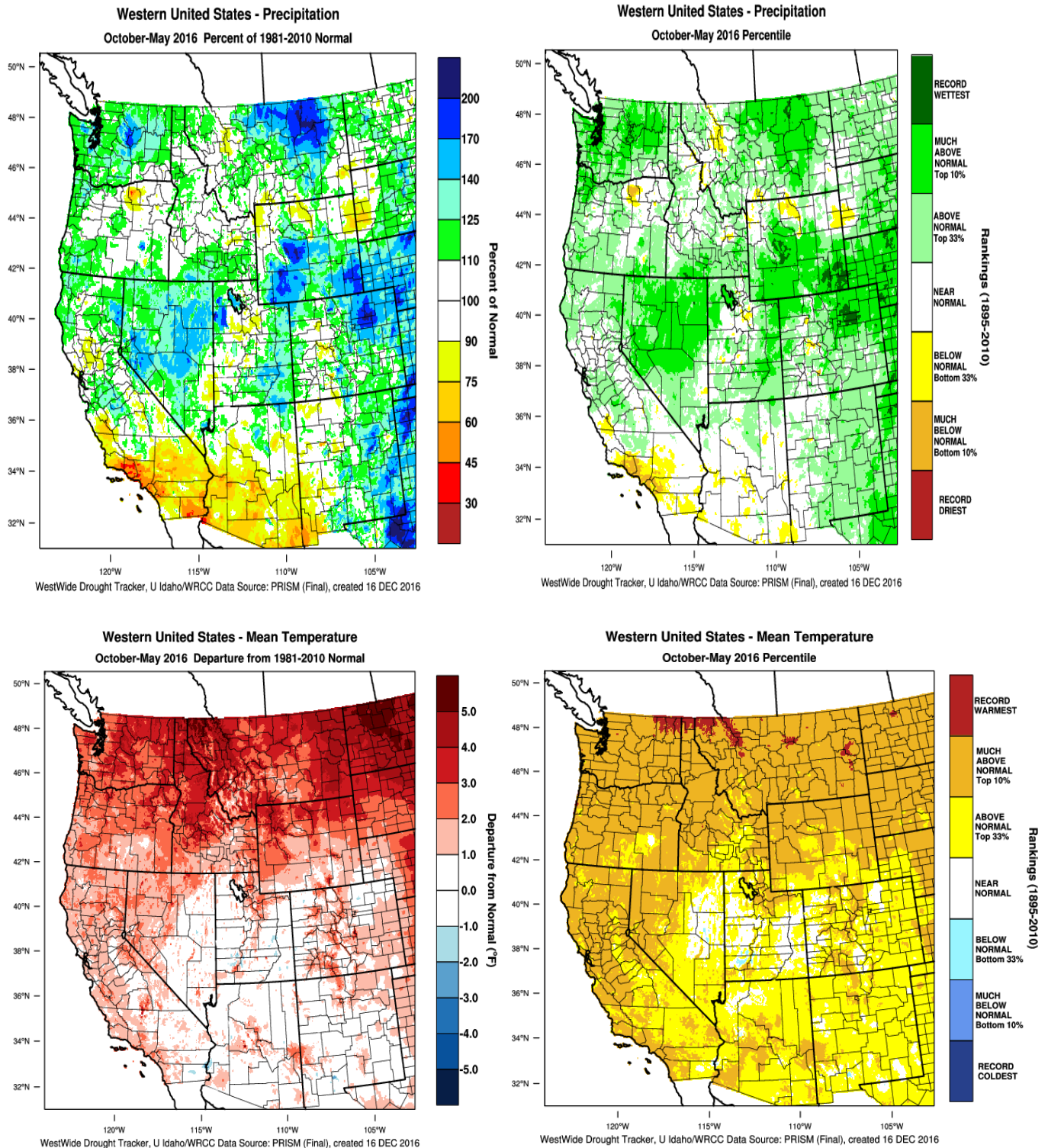
<u>IMET</u>	<u>Dates</u>	<u>Name of Fire Complex</u>
Noel Keene	Aug 19-23, 2016	Withers Fire near Paisley, OR (Fremont-Winema NF)
Noel Keene	Aug 23-26, 2016	Cherry Road Fire, near Homedale, ID (Vale District, BLM)
Frederic Bunnag	August 29-Sep 8, 2016	Rail Fire near Unity, OR (Wallowa-Whitman National Forest)
Noel Keene	Sep 11-16, 2016	Gap Fire near Horse Creek, CA (Klamath National Forest)

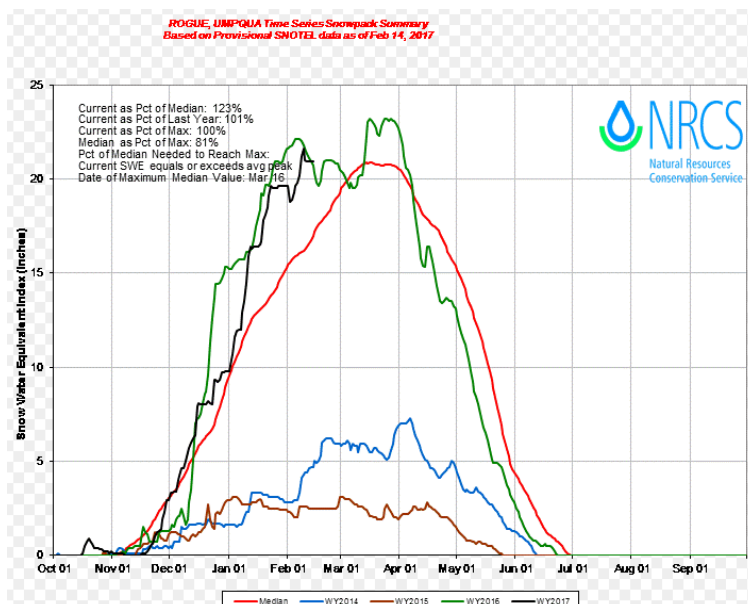
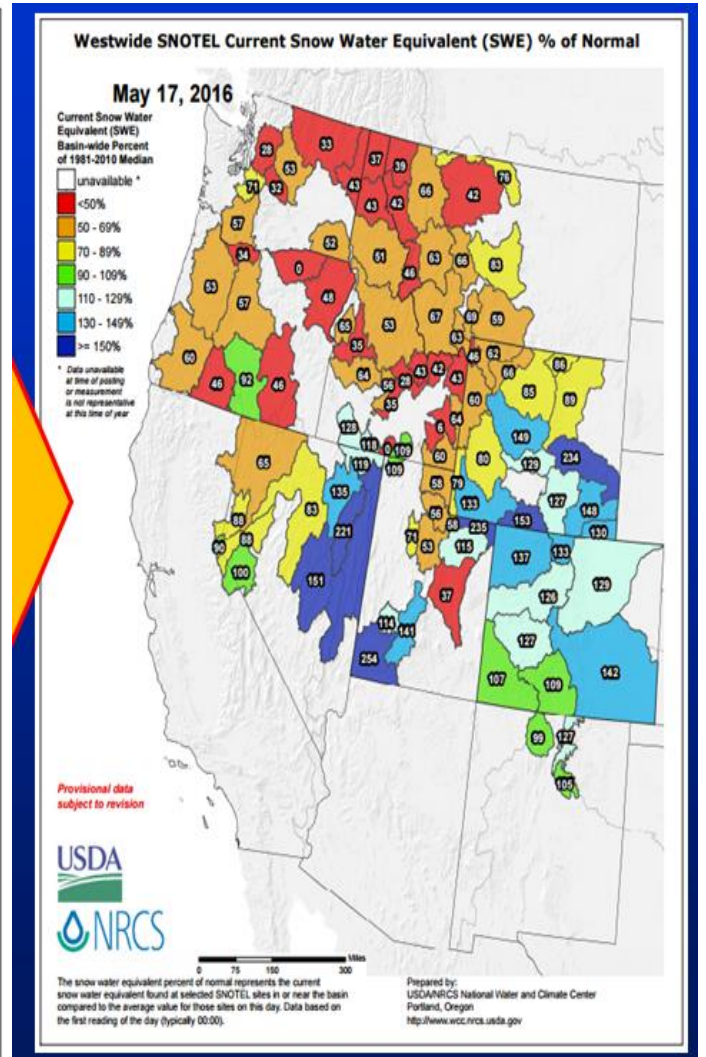
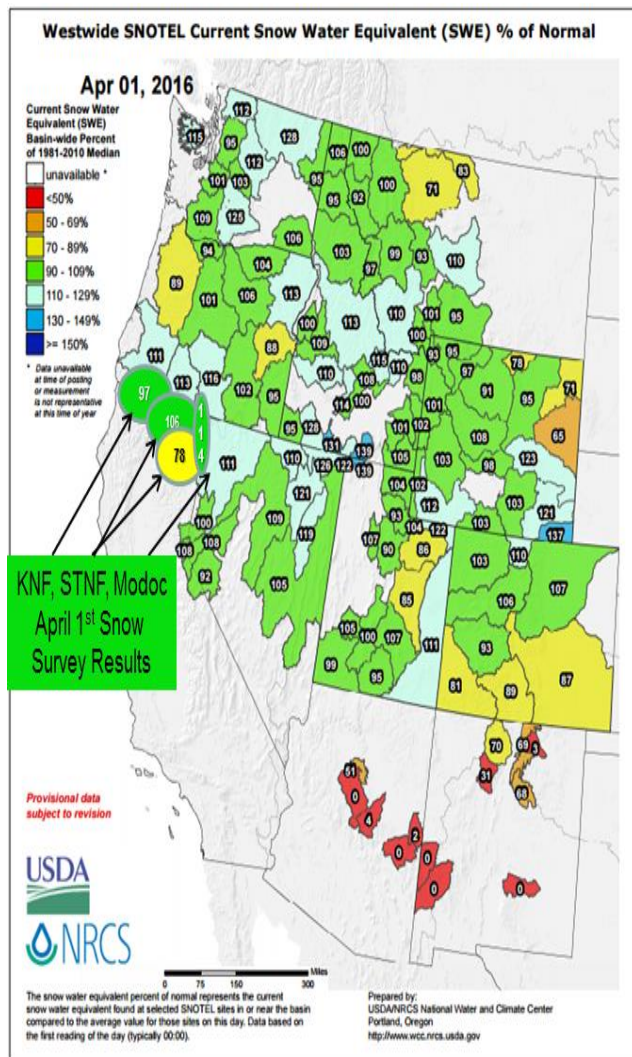
Number of IMET Dispatches	=	4
Number of Dispatch Days	=	25

7. Brief Weather, Climate, and Fire Season Summary:

The very strong El Nino of the 2015-16 Wet Season greatly changed soil and fuel moisture conditions across the forecast area to wetter than observed in at least a couple of years because precipitation was mostly above normal. However, very above normal temperatures from February through June, generally in

the highest 10% of the climate record for that time period based on PRISM data going back to 1985, caused the above normal, robust winter snowpack to melt faster than is average. Despite this fast melting of the snowpack, fire danger stayed mostly in the moderate range for the month of June due to healthy/moist enough live fuel components. Please see the Oct-May precipitation, temperature, and snowpack graphics, below:





While moisture levels were healthy enough to keep fire danger moderate across the area, a very warm spring led to increasing concerns for early season drying. By mid-May, significant warm spells across the area through the spring had supported brief and localized wildfires and escape concerns for prescribed burning. Altogether, the moisture and warming balanced out in that the Medford NWS Office did not begin issuing high season products until June 1st.

The first large fire of the season started from an early lightning outbreak on June 7th around midday. It was the Pony Fire and was located in Klamath National Forest in the Happy Camp Ranger District. Lightning data from that day indicated only a couple of strikes in the area where the fire started, and fuel status was still reported by the local fire agencies to be only moderate. Therefore, there was not a Red Flag Warning in place. The Fire Weather Planning Forecast did have LAL 3 in the forecast. The fire started in an area with heavy logging slash and 6 foot high Manzanita, so fuels in that area were locally more receptive. This fire was not fought aggressively due to risk to firefighters in the steep terrain and was ultimately contained at 2,860 acres on October 6th, 2016.

The Bybee Creek Fire at Crater Lake National Park started on the afternoon of July 28th. The cause is reported on InciWeb as unknown. This fire was contained the evening of August 9th at 1,072 acres.

The Withers Fire started on the Lakeview District of the BLM on the afternoon of August 17th by an arson. It was contained at 3,424 acres on August 26th.

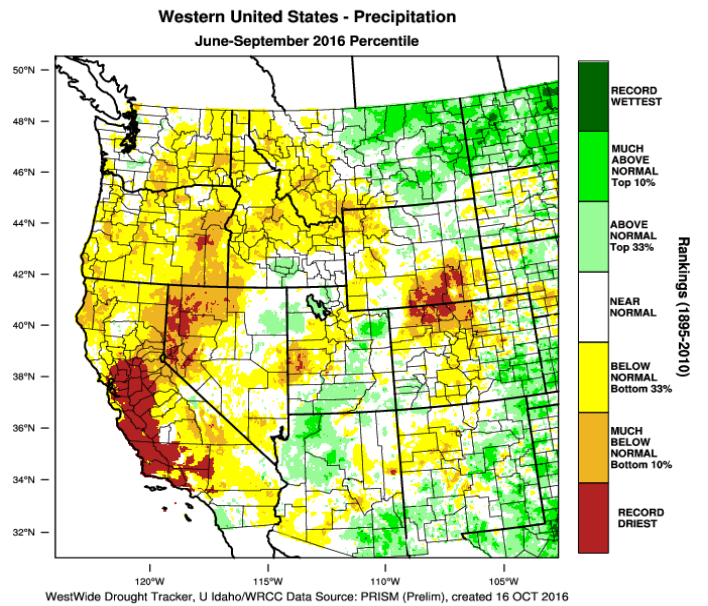
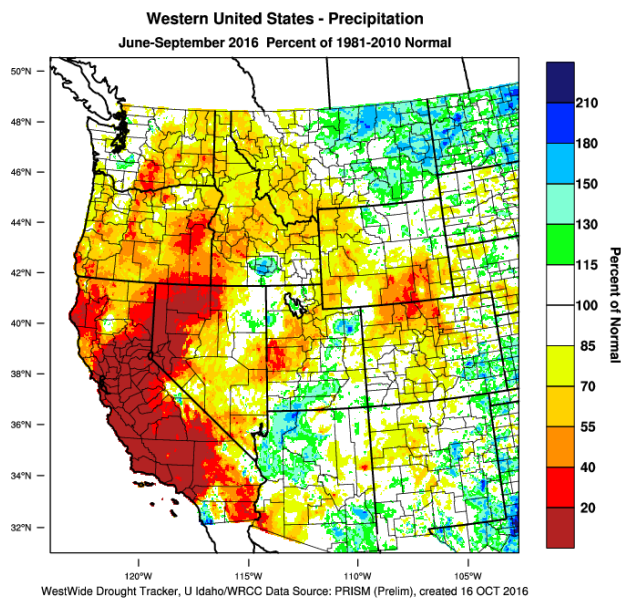
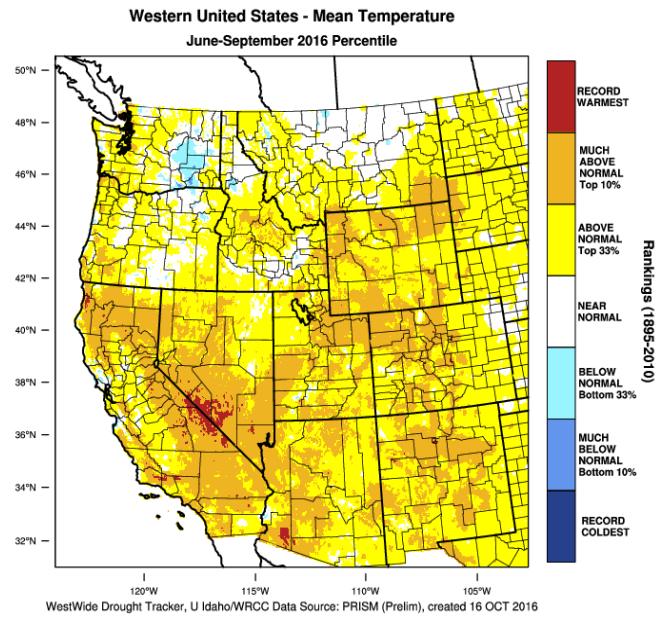
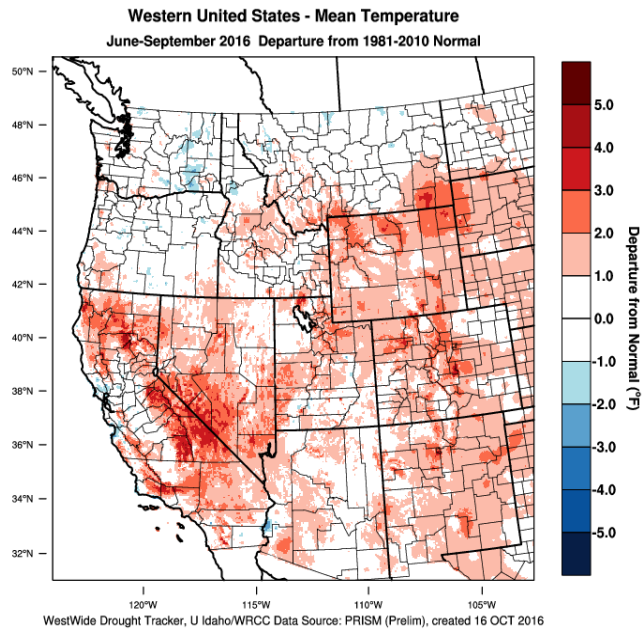
The Southwest Oregon ODF dealt with the arson fires Gold Canyon and Cleveland Ridge in the Selma and Shady Cover areas, respectively, in early September. Both fires were being investigated as possible arson fires as of their containment on/about September 6th. They were contained at 60 acres and 530 acres, respectively.

The largest fire of the season, known as the Gap Fire, started via an unknown cause on the evening of August 27th. This fire was on Klamath National Forest land, and occurred just west of the 2014 Beaver Fire. It was ultimately contained at 33,867 acres on September 17th.

The Soup Complex began on September 17th from an arson. It was located in Modoc National Forest and was contained at 2,652 on October 12th, 2017.

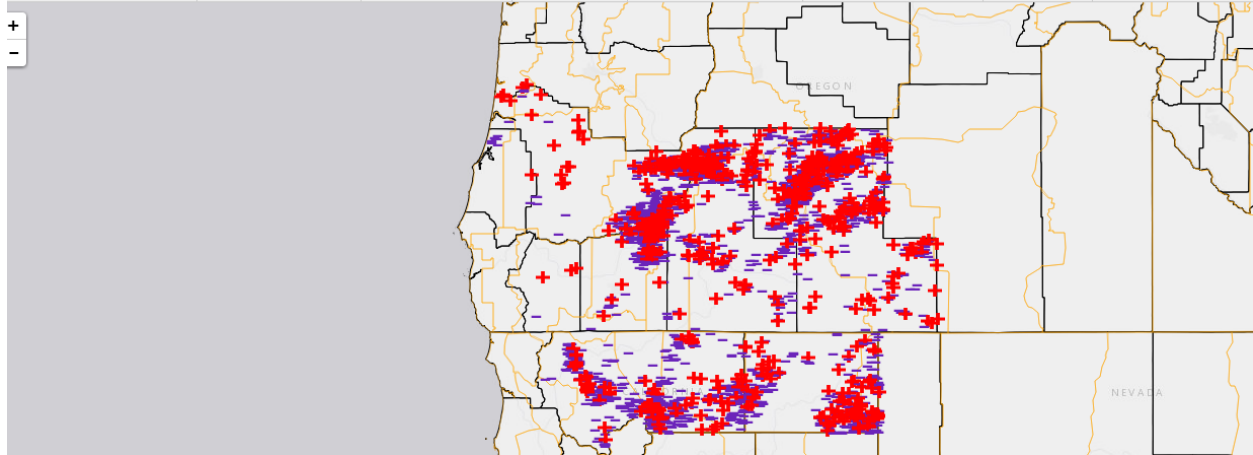
With the exception of the Gap Fire, fire activity was minimal across the forecast area during the 2016 season. This appears to be mostly due to the very limited number of natural ignitions when fuels were receptive/fire danger was high or higher. For the entire season, only 2 fire weather zones had enough lightning with sufficiently dry fuels to verify red flag warnings- and this was only 1 event on 1 day. Since there was not much fire activity, the fire agencies remained adequately staffed to handle the wildfires that did arise. Below are summary graphics of monthly temperature, precipitation, and lightning for the June 1st – Sep 30th fire season. October brought an, at first, gradual, then rapid end to fire season, as cooler conditions transitioned to an unusually wet month across the entire area. Our office stopped doing twice per day FWFs on October 23rd and NFDRS shortly thereafter.

Complied by
Fire Weather Focal Point
Brett Lutz



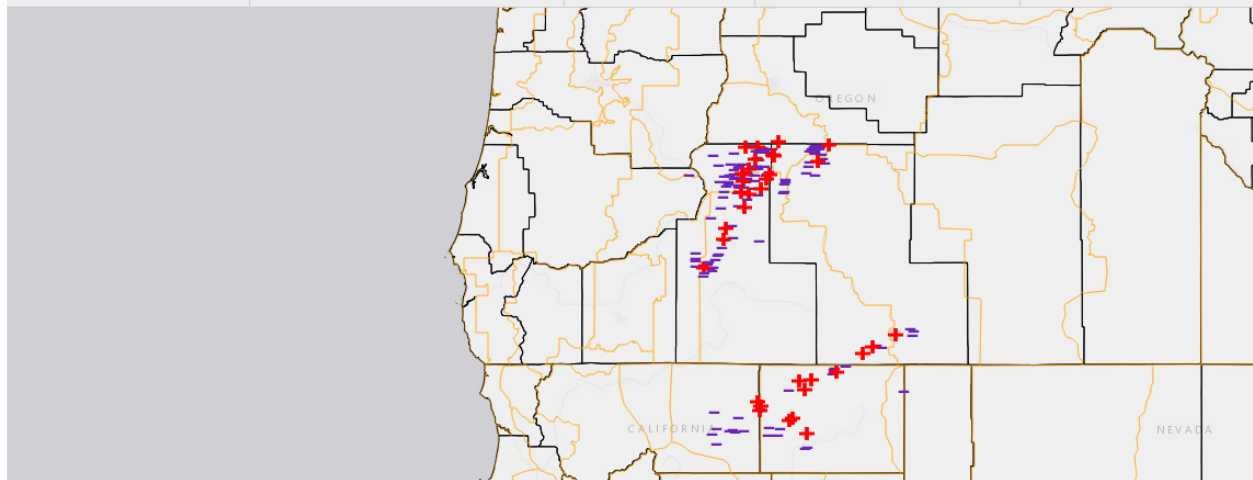
Lightning summary 6/1/2016 0:00UTC to 6/30/2016 23:00UTC

281	621	616	625	620	282	285	615	284	623	624	622	617	280
50	1	19	713	4	148	257	8	179	320	274	154	263	187
Josephine		Jackson		Modoc		Coos		Douglas		Klamath		Lake	Siskiyou
4		409		340		9		322		397		799	572



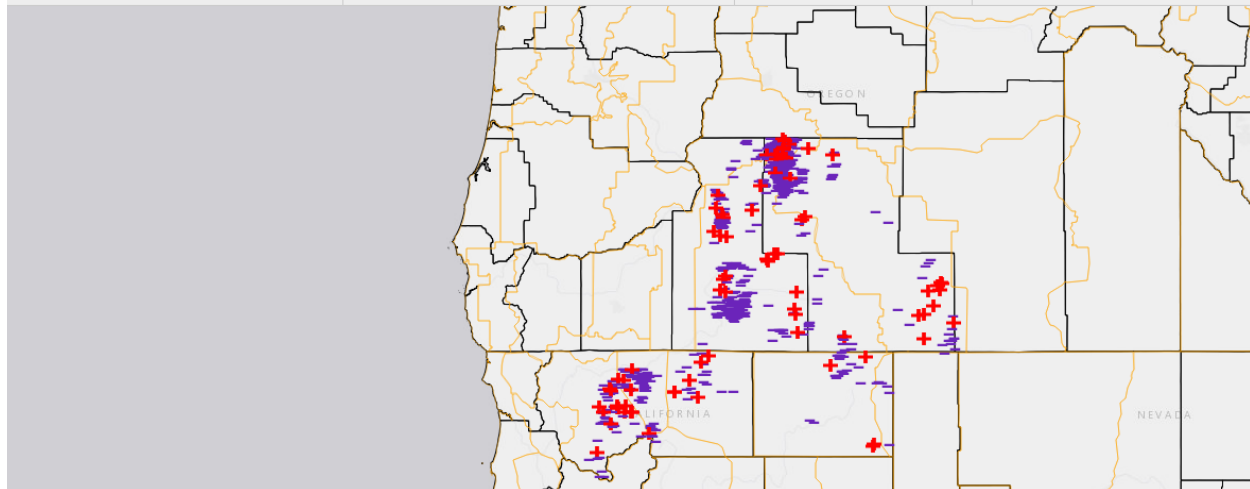
Lightning summary 7/1/2016 0:00UTC to 7/31/2016 23:00UTC

285	617		284	624		625	623
19	1		12	64		13	4
Douglas		Klamath		Lake		Modoc	Siskiyou
1		104		43		19	13



Lightning summary 8/1/2016 0:00UTC to 8/31/2016 23:00UTC

280	625	282	624	285	281	284	623
59	283	5	324	25	102	22	1
Siskiyou		Klamath		Lake		Modoc	
189		249		518		29	



Lightning summary 9/1/2016 0:00UTC to 9/30/2016 23:00UTC

281	621	617	624	285	622	280	620	625	619	284	616				
1	3	19	46	2	7	12	26	7	10	1	18				
Klamath		Josephine		Modoc		Siskiyou		Curry		Jackson		Lake		Douglas	
36		16		1		16		11		10		25		35	

